



RESTORE THE RIVER CORRIDOR

Nuclear Energy Legacies

Cleanout and stabilization activities resumed at the fuel transfer pit for the former Plutonium Recycle Test Reactor (309 Building), including fixing with paint any loose contamination on the sidewalls and preparations to remove sludge from the pit. Workers also resumed dismantling of the High Temperature Sodium Test Facility in the 337 Building and completed the first part of an asbestos abatement program there. Both efforts are part of 300-Area cleanup to move environmental hazards away from the Columbia River and nearby Richland.

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The 324 Building Deactivation Project team made significant progress toward completion of Tri-Party Agreement Milestone M-89-02 workscope to remove mixed waste and equipment from the highly contaminated hot cell known as B Cell. Nineteen grout containers have now been loaded and shipped from the 300 Area to compliant storage in the 200 Area. There are a total of 21 of these waste canisters to be shipped to the Low-Level Burial Grounds by July 31 to complete the requirements for this milestone.

Through effective deployment of a minimal operations staff at the 327 Building, legacy waste buckets were removed from one former testing hot cell; seven cans of materials were transferred from dry storage to another cell; and the team began final cleanup of yet another cell. Readying legacy waste containers for shipment are, from left on the flatbed, senior quality assurance technician Chuck Geiss and riggers Bob Massingale and Mark Ray. In the foreground is the 327 Building Project's person-in-charge Mardy Klinginsmith.



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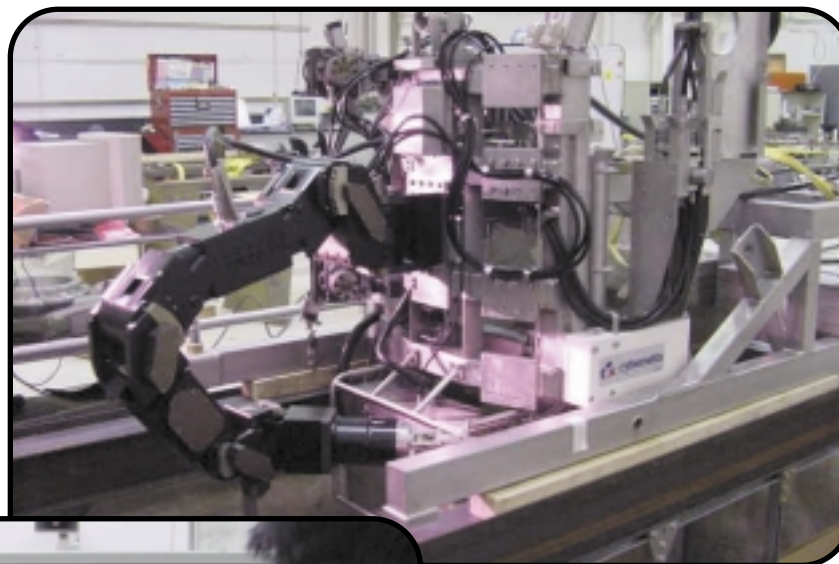
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Onsite testing and training continued with a new robotic work platform to be used for 324 Building in-cell and pipe-trench cleanout. The unit is shown here in a pipe trench mockup. Workers will remotely control the very dexterous heavy-duty robot arm with the aid of monitors (below). The system will allow cleanup work to proceed safely in these highly radioactive areas, where manned entry is not practical.



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At the Treated Effluent Disposal Facility (TEDF) and the much older and currently closed 340 Facility, where all process wastes from the 300 Area flow for treatment, workers successfully completed major tasks this quarter to maintain environmental compliance. At the 340 Facility, they safely replaced pre-filters and High Efficiency Particulate Air (HEPA) filters. Containment tents were used due to windy conditions during the work. At the

TEDF, the resin in four ion-exchange columns was replaced — the first change-outs since the facility opened in the mid-1990s. Workers removed the resin and installed more than 7 tons of new resin in columns C and D in just one day. A few days later, they achieved the same one-day feat with columns A and B.



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Disposition of surplus uranium continued, with shipment of all 421 boxes of excess uranium billets (about 235 metric tons) and 2.3 metric tons of uranium dioxide powder to the DOE Portsmouth Site in Ohio. Here, carpenters Jim Brown and Jim Fragola secure the last billet for shipment. Project workers also completed all nine planned shipments of contaminated uranium fuel (about 135 metric tons) to the Low-Level Burial Grounds in central Hanford.



The Accelerated Deactivation Project team successfully demolished one 300-Area water tower and prepared to demolish a second one in early July as part of the accelerated “skyline reduction” initiative. Workers also initiated non-manned, remote entry into the 224-T Building process cells to ensure there is no potential risk to the public or the environment. The cells have not been used since 1956 and not been entered since the 1980s.



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Spent Nuclear Fuel Project

Project workers successfully removed another nine loads of spent nuclear fuel from the K-West Basin and dried them in the Cold Vacuum Drying Facility this quarter. Some steps in the drying process are shown. First, nuclear chemical operator John Pugh prepares to remove the lid from the transport cask after its arrival from the K West Basin. Then he prepares the multi-canister overpack (MCO) for the necessary vacuum-drying process connections. Looking on, from left, are health physics technician Tony Diaz, operations engineer Bill Barrett, and nuclear chemical operator Pat McNeill. In the third photo, once the vacuum hoses are attached, McNeill makes any needed adjustments and ensures the connections are secure.



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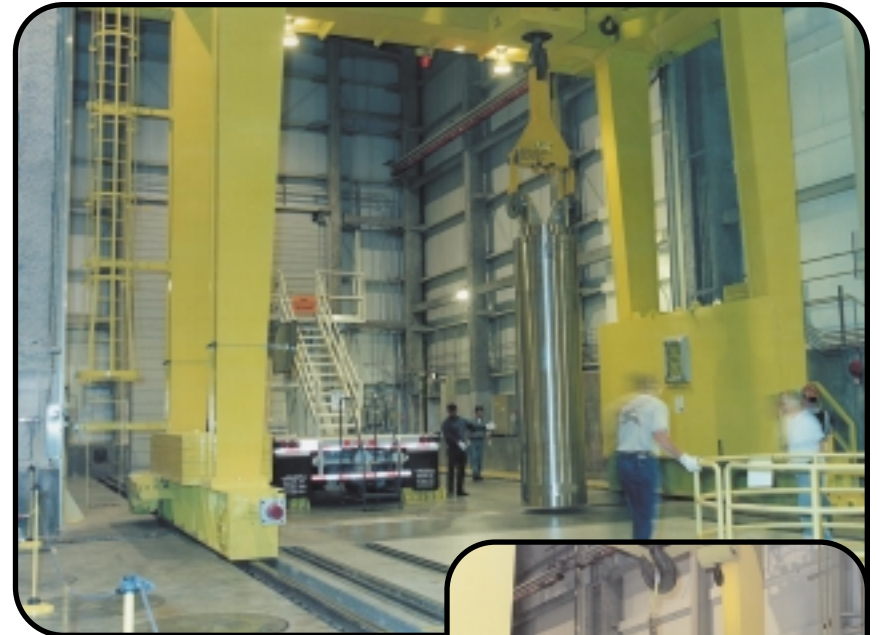
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Spent Nuclear Fuel Project

The nine loads placed in dry, interim storage at the Canister Storage Building in Hanford's central plateau this quarter effectively moved another 1.2 million curies of radioactivity away from the Columbia River shoreline. At right, quality assurance engineer John Marchand, process crane operator Earl Palmer, rigger Moses Rocha, nuclear chemical operator Kim Armatis and rigger Terry Nygaard accept delivery at the Canister Storage Building of an empty MCO from the warehouse. Rocha, nuclear chemical operator Mike Bryant, Nygaard, Armatis and Palmer later prepare the MCO with an outer cask (bottom photo) before it is sent to the K West Basin to be loaded with spent fuel.



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Project workers began implementing major baseline changes and breakthrough initiatives to accelerate fuel cleaning and removal in the K-West Basin. A new transfer crane, being inspected by lead engineer Brian Koons at the vendor's shop, was one of the pieces of equipment installed to improve the rate of processing at the K West Basin. Workers also installed two more underwater processing tables, one of which is shown below with boilermaker Mike Downing, and additional fuel- and basket-handling equipment.



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Steps were also taken to accelerate spent-fuel movement out of the K-East Basin. A contract was awarded for design of fuel transfer casks to move the K-East Basin spent fuel, some of which is shown here, to the K-West Basin, where it will then be sorted, cleaned and placed in MCOs for transfer to the Cold Vacuum Drying Facility.



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Environmental Restoration Along the River

The D and DR reactors area is one of six reactor areas along the Columbia River shoreline in which environmental restoration is in progress, as described by the callouts on the photo. Similar progress has been made in some of the other reactor areas, as well as in the 300 Area. To date, 3 million tons of contaminated soil and other material have been removed from the river corridor and safely disposed in the Environmental Restoration Disposal Facility on the central plateau. The 3 million tons represents nearly a third of the estimated volume required to restore the river corridor.

